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(19) **FEDERAL REPUBLIC  
OF GERMANY**

(12) **Utility model**  
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(54) Pericardium prosthesis

**DE 295 17 393 U 1**

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**DESCRIPTION:**

The pericardium prosthesis is a pouch made from biocompatible, non-expansible material, which surrounds the heart and so assumes the function of the original pericardium.

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#### Prior art and the resulting problem

In dilated cardiomyopathy, as a result of the insufficiency of the myocardium and the resulting volume loading on the heart, increasing dilatation of the myocardium occurs. That dilatation also affects the pericardium. As a result of the dilatation, a reduction in pumping performance occurs. Owing to the fact that, when pumping performance is reduced, the residual end systolic volume increases while diastolic filling initially is insignificantly reduced, further volume loading occurs, which brings about further dilatation as a consequence. That situation starts a vicious circle in accordance with Laplace's law. The mortality of this disease is very high.

#### Solution to the problem

The vicious circle of volume loading, dilatation and myocardial insufficiency is broken by surrounding the heart with a pouch made from non-expansible material, thereby halting further dilatation.

#### Advantage achieved

By surrounding the heart with the pericardium prosthesis, further dilatation of the myocardium is averted.

#### Practical form of the invention

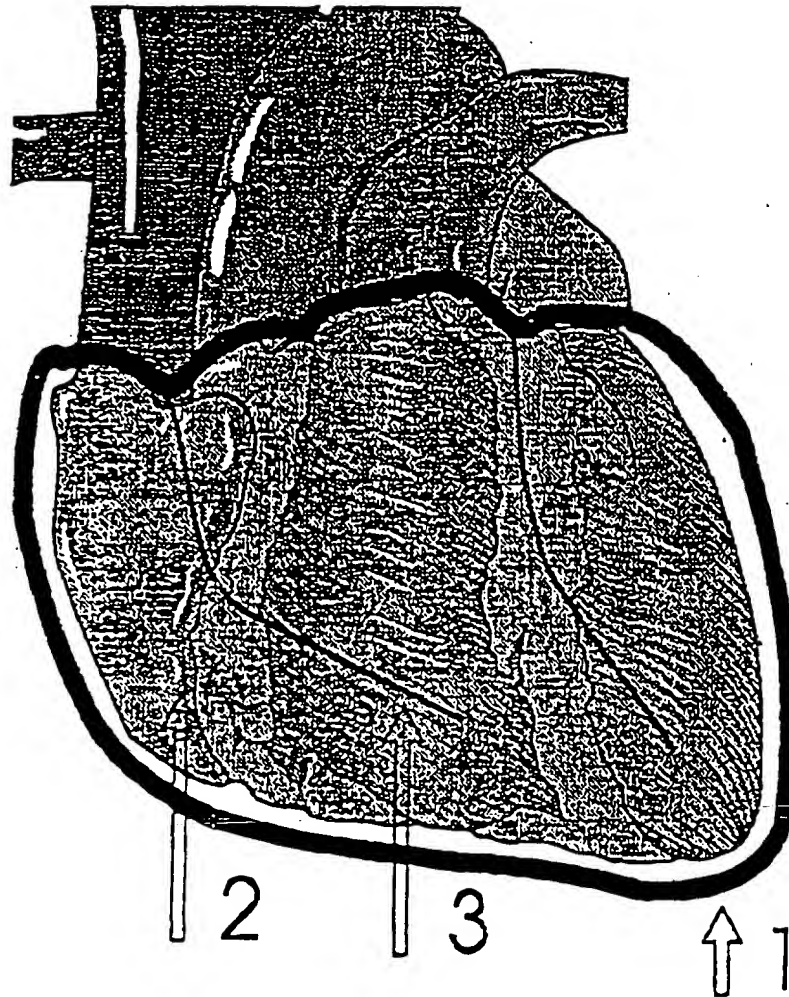
A possible practical form of the pericardium prosthesis consists in the heart's being surrounded with a pouch to be matched to anatomical conditions, which is made from a biocompatible and non-expansible, or at least hardly expansible, material.

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**CLAIMS:**

The pericardium prosthesis is characterised in that the largest portions of the myocardium are located within a non-expansible pouch, thereby averting further dilatation of the myocardium caused by end diastolic pressure.

Figure 1: Schematic drawing of the pericardium prosthesis



**1 - pericardium prosthesis**

**2 - front view of the heart**

**3 - pericardium prosthesis seam**